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EXAMINER	
ALBERTALLI, BRIAN LOUIS	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/578,073	SCHRAMM, HAUKE	
	Examiner	Art Unit	
	BRIAN L. ALBERTALLI	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,11-13 and 16-18* is/are rejected.

7)☒ Claim(s) *7-10,14,15,19 and 20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 4, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell et al. (U.S. Patent 5,799,273), in view of Hon et al. (U.S. Patent 6,490,563).

In regard to claim 1, Mitchell et al. disclose a method for error detection within text transcribed from a first speech signal by an automatic speech-to-text transcription system (speech recognized during a dictation step, column 8, lines 52-57), comprising providing the first speech signal and the transcribed text outputs for a comparison between first speech signal and transcribed text for an identification of potential errors in the text (the dictated audio data is stored along with the transcribed text, so that a user can later compare the dictated audio and transcribed text to identify potential errors, column 10, line 52 to column 11, line 6).

Mitchell et al. differs from the claimed invention by substitution of generating a second speech signal from the transcribed text and comparing the first speech signal and the second speech signal for comparing the first speech signal and the text directly.

Hon et al. disclose a method for error detection within transcribed text comprising generating a second speech signal from the transcribed text for detecting potential

errors (a speech recognition system converts input speech to text, which is then converted back to speech using TTS, column 7, lines 18-22).

One of ordinary skill in the art at the time of invention could have substituted comparing the first speech signal to the second generated speech signal instead of comparing the first speech signal directly to the text and the result would have predictably allowed the user to "proofread" text using only audio (suggested as advantageous by Hon et al. at column 6, lines 2-5).

Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Mitchell et al. to generate a second speech signal from the transcribed text and compare the first speech signal and the second speech signal to identify potential errors in the text.

In regard to claim 4, Mitchell et al. do not disclose generating a second speech signal.

Hon et al. disclose a method for error detection within transcribed text comprising generating a second speech signal by applying an inverse speech transcription process, generating a feature vector sequence from the text, using (a) statistical models of the speech-to-text transcription system and (b) a state sequence obtained in the process of transcription of the text from the first speech signal (HMM models are used to both generate the speech, column 6, lines 41-57; as well as recognize the input speech, column 8, lines 43-57).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Mitchell et al. to generate a second speech signal by applying an inverse speech transcription process, generating a feature vector sequence from the text, using (a) statistical models of the speech-to-text transcription system and (b) a state sequence obtained in the process of transcription of the text from the first speech signal, because it would make the first speech signal and the second speech signal match more closely, thus the two signals would easier to listen to simultaneously for the user.

In regard to claim 11, Mitchell et al. disclose an error detection system for a speech-to-text transcription system providing a transcribed text (412) from a first speech signal (400) (speech recognized during a dictation step, column 8, lines 52-57), the error detection system comprising:

means for providing first (400, 418) speech signal and transcribed text for comparison between first speech signal and transcribed text for an identification of potential errors in the text (412) (the dictated audio data is stored along with the transcribed text, so that a user can later compare the dictated audio and transcribed text to identify potential errors, column 10, line 52 to column 11, line 6).

Mitchell et al. differs from the claimed invention by substitution of means for generating a second speech signal from the transcribed text and comparing the first speech signal and the second speech signal for comparing the first speech signal and the text directly.

Hon et al. disclose a system for error detection within transcribed text comprising means for generating a second speech signal from the transcribed text for detecting potential errors (a speech recognition system converts input speech to text, which is then converted back to speech using TTS, column 7, lines 18-22).

One of ordinary skill in the art at the time of invention could have substituted comparing the first speech signal to the second generated speech signal instead of comparing the first speech signal directly to the text and the result would have predictably allowed the user to "proofread" text using only audio (suggested as advantageous by Hon et al. at column 6, lines 2-5).

Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Mitchell et al. to generate a second speech signal from the transcribed text and compare the first speech signal and the second speech signal to identify potential errors in the text.

3. Claims 2, 3, 5, 6, 12, 13, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell et al., in view of Hon et al., and further in view of Yamazaki (U.S. Patent 6,088,674).

In regard to claim 2, Mitchell et al. and Hon et al. do not disclose the speed and/or the volume of the second speech signal matches the speed and/or the volume of the first speech signal.

Yamazaki et al. disclose a method for comparing a first speech signal to a second speech signal generated from the text transcribed from the first speech signal, wherein:

the speed and/or the volume of the second speech signal matches the speed and/or the volume of the first speech signal (speech is input to a speech recognition section, column 28, lines 6-9; the transcription of which is then used to generate a synthetic speech signal, lines 10-27; the amplitudes of the two waveforms are then matched, lines 54-60).

It would have been obvious to one of ordinary skill in the art at the time of invention to further modify Mitchell et al. and Hon et al. to match the speed and/or volume of the second speech signal to the first signal, because it would make the two signals easier to listen to simultaneously for the user.

In regard to claim 3, Mitchell et al. and Hon et al. do not disclose a set of filter functions is applied to the first speech signal to approximate the spectrum of the first speech signal to the spectrum of the second speech signal.

Yamazaki et al. disclose a method for comparing a first speech signal to a second speech signal generated from the text transcribed from the first speech signal, wherein:

a set of filter functions is applied to the first speech signal to approximate the spectrum of the first speech signal to the spectrum of the second speech signal (the voice tone is adjusted to match the speech signals, column 28, lines 61-67).

It would have been obvious to one of ordinary skill in the art at the time of invention to further modify Mitchell et al. and Hon et al. to approximate the spectrum of the first speech signal to the spectrum of the second speech signal, because it would make the two signals easier to listen to simultaneously for the user.

In regard to claims 5 and 12, Mitchell et al. and Hon et al. do not disclose a comparison signal is generated by subtracting or superimposing first and second speech signals.

Yamazaki et al. disclose a method for comparing a first speech signal to a second speech signal generated from the text transcribed from the first speech signal, wherein:

a comparison signal is generated by subtracting or superimposing first and second speech signals (see Fig. 24, the original waveform 10B and synthesized waveform 10C are compared, column 27, line 64 to column 28, line 5).

It would have been obvious to one of ordinary skill in the art at the time of invention to further modify Mitchell et al. and Hon et al. to generate a comparison signal by subtracting or superimposing first and second speech signals, so a user could quickly visually confirm the comparison.

In regard to claims 6 and 13, Mitchell et al. and Hon et al. do not disclose the comparison signal is provided acoustically and/or visually.

Yamazaki et al. disclose a method for comparing a first speech signal to a second speech signal generated from the text transcribed from the first speech signal, wherein:

the comparison signal is provided acoustically and/or visually (see Fig. 24, a user can visually compare the original waveform 10B and synthesized waveform 10C and audibly compare them by using playback buttons 10F and 10G, column 27, line 64 to column 28, line 5).

It would have been obvious to one of ordinary skill in the art at the time of invention to further modify Mitchell et al. and Hon et al. to provide the comparison signal acoustically and/or visually so the user could either a) quickly visually confirm the comparison or b) to "proofread" text using only audio.

In regard to claim 16, Mitchell et al. disclose a computer program product for error detection for a speech-to-text transcription system providing a transcribed text from a first speech signal (speech recognized during a dictation step, column 8, lines 52-57), the computer program product comprising program means for:

providing first speech signal outputs for a comparison between first speech signal and the transcribed text (the dictated audio data is stored along with the transcribed text, so that a user can later compare the dictated audio and transcribed text to identify potential errors, column 10, line 52 to column 11, line 6).

Mitchell et al. differs from the claimed invention by substitution of generating a second speech signal from the transcribed text and comparing the first speech signal and the second speech signal for comparing the first speech signal and the text directly.

Hon et al. disclose a method for error detection within transcribed text comprising generating a second speech signal from the transcribed text for detecting potential errors (a speech recognition system converts input speech to text, which is then converted back to speech using TTS, column 7, lines 18-22).

One of ordinary skill in the art at the time of invention could have substituted comparing the first speech signal to the second generated speech signal instead of comparing the first speech signal directly to the text and the result would have predictably allowed the user to "proofread" text using only audio (suggested as advantageous by Hon et al. at column 6, lines 2-5).

Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Mitchell et al. to generate a second speech signal from the transcribed text and compare the first speech signal and the second speech signal to identify potential errors in the text.

Mitchell et al. and Hon et al. do not disclose the speed and/or the volume of the second speech signal matches the speed and/or the volume of the first speech signal.

Yamazaki et al. disclose a method for comparing a first speech signal to a second speech signal generated from the text transcribed from the first speech signal, wherein:

the speed and/or the volume of the second speech signal matches the speed and/or the volume of the first speech signal (speech is input to a speech recognition section, column 28, lines 6-9; the transcription of which is then used to generate a synthetic speech signal, lines 10-27; the amplitudes of the two waveforms are then matched, lines 54-60).

It would have been obvious to one of ordinary skill in the art at the time of invention to further modify Mitchell et al. and Hon et al. to match the speed and/or volume of the second speech signal to the first signal, because it would make the two signals easier to listen to simultaneously for the user.

In regard to claim 17, Mitchell et al. and Hon et al. do not disclose a comparison signal is generated by subtracting or superimposing first and second speech signals.

Yamazaki et al. disclose a method for comparing a first speech signal to a second speech signal generated from the text transcribed from the first speech signal, wherein:

a comparison signal is generated by subtracting or superimposing first and second speech signals (see Fig. 24, the original waveform 10B and synthesized waveform 10C are compared, column 27, line 64 to column 28, line 5).

It would have been obvious to one of ordinary skill in the art at the time of invention to further modify Mitchell et al. and Hon et al. to generate a comparison signal by subtracting or superimposing first and second speech signals, so a user could quickly visually confirm the comparison.

In regard to claim 18, Mitchell et al. and Hon et al. do not disclose the comparison signal is provided acoustically and/or visually.

Yamazaki et al. disclose a method for comparing a first speech signal to a second speech signal generated from the text transcribed from the first speech signal, wherein:

the comparison signal is provided acoustically and/or visually (see Fig. 24, a user can visually compare the original waveform 10B and synthesized waveform 10C and audibly compare them by using playback buttons 10F and 10G, column 27, line 64 to column 28, line 5).

It would have been obvious to one of ordinary skill in the art at the time of invention to further modify Mitchell et al. and Hon et al. to provide the comparison signal acoustically and/or visually so the user could either a) quickly visually confirm the comparison or b) to "proofread" text using only audio.

Allowable Subject Matter

4. Claims 7-10, 14, 15, 19, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In regard to claims 7, 14, and 19, Mitchell et al., Hon et al., and Yamazaki et al. do not disclose or suggest that an error signal is output when the comparison signal is beyond a predefined range.

In regard to claims 9, 15, and 20, Mitchell et al., Hon et al., and Yamazaki et al. do not disclose or suggest detecting patterns in the comparison signal to detect a certain type of error in the transcribed text.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Runge et al. (U.S. Patent Application Publication 2006/0149546) is an intervening reference that anticipates the applicant's claimed invention. Hanson (U.S. Patent 6,064,965) discloses a method for combining original speech and synthesized speech for audible proofreading. Hanson (U.S. Patent 6,338,038) and Lewis et al. (U.S. Patent 7,010,489) disclose methods for matching the speed of synthesized speech to original speech. Buth et al. (U.S. Patent 6,546,369) disclose a method that compares synthesized speech to input speech to determine a correct pronunciation for the synthesized speech.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN L. ALBERTALLI whose telephone number is (571)272-7616. The examiner can normally be reached on Mon - Fri, 8:00 AM - 5:30 PM, every second Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BLA 5/8/08

/David R Hudspeth/

Supervisory Patent Examiner, Art Unit 2626